CLAIMS

1.   A polypeptide comprising tetanus toxin (TeNT) fragment C, or an immunogenic fragment thereof, which tetanus toxin fragment C, or immunogenic fragment thereof comprises a mutation in a loop region, which mutation results in:

    a reduction in the binding of the tetanus toxin fragment C, or immunogenic fragment thereof, to gangliosides; and/or

    a reduction in the binding of the tetanus toxin fragment C, or immunogenic fragment thereof, to primary motoneurones; and/or

    a reduction in the ability of the tetanus toxin fragment C, or immunogenic fragment thereof, to undergo retrograde transport.

2.   A polypeptide according to claim 1 wherein said loop region is selected from amino acid residues 1214 to 1219 and 1272 to 1282 of the amino acid sequence of TeNT fragment C.

3.   A polypeptide according to claim 1 or 2 wherein said mutation is at least one deletion.

4.   A polypeptide according to claim 3 wherein said deletion is selected from Δ1214 to 1219, Δ1274 to 1279 and Δ1271 to 1282 of the amino acid sequence of TeNT fragment C.

5.   A polynucleotide encoding a polypeptide according to any one of claims 1 to 4.

6.   A vector comprising a polynucleotide according to claim 5 operably linked to a regulatory sequence permitting expression of the polynucleotides in a host cell.

7.   A host cell comprising a vector according to claim 6.

8.   A host cell according to claim 7 which is a bacterium.

9.   A pharmaceutical composition comprising a polypeptide according to any one of

claims 1 to 4, a polynucleotide according to claim 5 or a vector according to claim 6 together with a pharmaceutically acceptable carrier to diluent.

10. A vaccine composition comprising a polypeptide according to any one of claims 1 to 4, a polynucleotide according to claim 5 or a vector according to claim 6 together with a pharmaceutically acceptable carrier to diluent.

11. A method of treating or preventing or reducing the susceptibility to *C. tetani* infection in a human or animal which comprises administering to the human or animal an effective amount of a polypeptide according to any one of claims 1 to 4, a polynucleotide according to claim 5 or a vector according to claim 6.

12. Use of a polypeptide according to any one of claims 1 to 4, a polynucleotide according to claim 5 or a vector according to claim 6 in a method for producing antibodies which recognise epitopes within a TeNT polypeptide.

13. A method for producing antibodies which recognise epitopes within a TeNT polypeptide which method comprises administering a polypeptide according to any one of claims 1 to 4, a polynucleotide according to claim 5 or a vector according to claim 6 to a mammal.

14. A method of treating *C. tetani* infection in a human or animal which comprises administering to a human or animal an effective amount of an antibody produced according to claim 12 or 13.

15. A method for reducing the binding affinity of a TeNT fragment C polypeptide for gangliosides which method comprises modifying one or more amino acid residues present in a surface-exposed loop region of the polypeptide.

16. A polypeptide produced by the method of claim 15.